

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2018-82-S

IN RE:)
)
Application of Palmetto Wastewater)
Reclamation LLC for adjustment of rates)
and charges for, and modification to certain)
terms and conditions related to the)
provision of)
sewer service.)
_____)

PREFILED REBUTTAL TESTIMONY OF HAROLD WALKER
ON BEHALF OF PALMETTO WASTEWATER RECLAMATION LLC

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Valley Forge, Pennsylvania

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OF
HAROLD WALKER, III
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INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS ADDRESS.

A. My name is Harold Walker, III. I am employed by Gannett Fleming Valuation and Rate Consultants, LLC as Manager, Financial Studies. My business mailing address is P. O. Box 80794, Valley Forge, Pennsylvania 19484.

Q. ARE YOU THE SAME HAROLD WALKER WHO PREVIOUSLY SUBMITTED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY AT THIS TIME?

A. The purpose of my Rebuttal Testimony is to respond to the Direct Testimony of David C. Parcell on behalf of the South Carolina Office of Regulatory Staff (“Staff”) concerning capital structure, common equity cost rate and overall rate of return for Palmetto Wastewater Reclamation LLC (“PWR” or the “Company”).

SUMMARY

Q. WHAT AREAS OF MR. PARCELL’S TESTIMONY DO YOU ADDRESS IN YOUR REBUTTAL TESTIMONY?

A. My testimony addresses Mr. Parcell’s recommended:

- Capital structure ratios for PWR;
- Risk factors;
- Application of the Discounted Cash Flow Model (“DCF”), Capital Asset Pricing Model (“CAPM”) and Comparable Earnings;
- Common equity cost rate applicable to PWR; and

- Overall rate of return applicable to PWR.

My testimony also addresses Mr. Parcell's comments on my prepared direct testimony. I respectfully disagree with Mr. Parcell's proposed return on equity of 9.6% and his proposed overall rate of return of 7.55% and I do not believe the Public Service Commission of South Carolina ("Commission" or "PSC") should accept Mr. Parcell's proposals.

Based upon the results of my entire analysis contained in my direct testimony, my recommendation is that the PWR be permitted an overall rate of return of 8.45% including a recommended common equity cost rate of 10.75%. As a check on the reasonableness of my common equity cost rate recommendation, I reviewed Value Line's projected returns on common equity for comparable utilities which range from 10.5% to 14.0%. The range of the projected returns suggests that my recommendation that PWR be permitted an opportunity to earn on common equity of 10.75% is reasonable, if not conservative.

A FAIR RATE OF RETURN

Q. DOES THE RECOMMENDATION OF MR. PARCELL PROVIDE THE COMPANY WITH THE OPPORTUNITY TO EARN A FAIR RATE OF RETURN?

A. No. In *Bluefield*¹, a fair rate of return is defined as: (1) equal to the return on investments in other business undertakings with the same level of risks (the comparable earnings standard); (2) sufficient to assure confidence in the financial soundness of a utility (the financial integrity standard);, and (3) will maintain and support its credit, enabling the utility to raise

¹ *Bluefield Water Works & Improvement Company v. P.S.C. of West Virginia*, 262 U.S. 679 (1923).

1 or attract additional capital necessary to provide reliable service (the capital attraction
2 standard).

3 Mr. Parcell's rate of return recommendation is not appropriate and does not produce a
4 fair rate of return for PWR. Throughout this rebuttal testimony I highlight the numerous
5 defects contained in his testimony and recommendation. Mr. Parcell's recommendations do
6 not comport with the precepts of a fair rate of return, including the comparable earnings
7 standard; capital attraction standard, and the financial integrity standard. Mr. Parcell's
8 testimony offers the theory that Ni Pacolet Milliken Utilities, LLC's indirect ownership of
9 PWR reduces the risk of PWR providing wastewater service to customers.² I do not believe
10 it is reasonable that PWR should be afforded something less than a fair rate of return because
11 they are indirectly owned by a larger company such as Ni Pacolet Milliken Utilities, LLC.

12 Mr. Parcell's recommendations violate the precepts of a fair rate of return, including
13 the comparable earnings standard, the capital attraction standard, and the financial integrity
14 standard. Mr. Parcell's recommendation violates all three-mentioned fair rate of return
15 precepts as demonstrated by his own testimony. PWR is entitled to a return that will enable
16 it to attract additional capital, not only capital provided by Ni Pacolet Milliken Utilities,
17 LLC. The credit that enables Ni Pacolet Milliken Utilities, LLC's debt to be issued is that of
18 the issuing entity, Ni Pacolet Milliken Utilities, LLC. A fair rate of return for PWR is the
19 credit that should enable the PWR to attract capital regardless of Ni Pacolet Milliken
20 Utilities, LLC. The risk of PWR providing service to customers is not mitigated simply

² Ni South Carolina LLC is the direct parent of Palmetto Wastewater Reclamation LLC and Ni South Carolina LLC is owned by Ni Pacolet Milliken Utilities, LLC.

1 because Ni Pacolet Milliken Utilities, LLC provides capital or because Ni Pacolet Milliken
 2 Utilities, LLC owns other utilities. Risk does not change with ownership, and the price or
 3 cost of bearing risk is what it is. Mr. Parcell's recommendation offers no incentive to
 4 investors to invest in PWR wastewater assets when higher returns are available from other
 5 less risky wastewater assets. Investors will not provide capital and should not be forced to
 6 provide capital when higher risk-adjusted returns are available.

7 **MR. PARCELL'S CAPITAL STRUCTURE**

8 **Q. WHAT CAPITAL STRUCTURE RATIOS DOES MR. PARCELL RECOMMEND** 9 **BEING USED TO DEVELOP PWR'S OVERALL RATE OF RETURN?**

10 A. Mr. Parcell recommends the use of a hypothetical capital structure consisting of 45% long-
 11 term debt and 55% equity for the PWR. Mr. Parcell states his recommended hypothetical
 12 capital structure is based on the capital structure of his proxy group however, his proxy group
 13 had an average capital structure of 44.3% debt and 55.7% equity and a median capital
 14 structure of 41.5% debt and 58.5% equity in 2018 (see Exhibit DCP-2 Schedule 4).³

15 PWR's actual capital structure, 40.3% debt and 59.7% equity, is within the range of
 16 Mr. Parcell's proxy group capital structure ratios.⁴ Given the small size of PWR and the
 17 related greater risk, he should employ an equity ratio that is higher than the proxy group to

³ The common equity ratio for Mr. Parcell's proxy group is projected to increase during the 2021-2023 period according to the information shown on Mr. Parcell's Schedule 4.

⁴ Two companies in Mr. Parcell's proxy group had a common equity ratio of 62% or more in 2018. Three companies in his proxy group are projected to have a common equity ratio of 62.5% or more during the 2021-2023 period according to the information shown on Mr. Parcell's Schedule 4.

1 offset their risk difference. Mr. Parcell has not presented any evidence proving PWR's actual
2 capital structure is unreasonable.

3 Further, I believe if the PWR's actual 59.7% common equity ratio was converted to a
4 55% common equity ratio, as recommended by Mr. Parcell, without just compensation in the
5 form of a much higher return on equity that it may represent a taking of PWR's property.

6 **Q. DID MR. PARCELL RECOMMEND A FINANCIAL RISK ADJUSTMENT TO**
7 **ACCOUNT FOR THE DIFFERENCE IN THE COMMON EQUITY RATIO OF HIS**
8 **PROXY GROUP AND THE COMMON EQUITY RATIO HE RECOMMENDS FOR**
9 **PWR?**

10 A. No, Mr. Parcell did not account for the difference, or higher risk, common equity ratio he
11 recommends for PWR versus the common equity ratio employed by his proxy group. As
12 discussed in my direct testimony, PWR is a small company and they are much smaller than
13 Mr. Parcell's proxy group. The size of a company affects risk. A smaller company requires
14 the employment of proportionately less financial leverage (i.e., debt and preferred capital)
15 than a larger company to balance out investment risk. If investment risk is not balanced out,
16 then a higher cost of capital is required.

17 **DEBT COST RATE**

18 **Q. DOES MR. PARCELL AGREE WITH YOUR RECOMMENDED 5.04% DEBT**
19 **COST RATE?**

20 A. Yes. However, I would point out that PWR witness Daday takes issue in his rebuttal
21 testimony with the manner in which ORS addresses the effective interest rate in its proposed
22 accounting adjustments.

1 **PROXY GROUP**

2 **Q. ON PAGES 20 AND 40 MR. PARCELL STATES THAT YOUR PROXY GROUP**
 3 **INCLUDES TWO COMPANIES THAT DO NOT MEET YOUR SELECTION**
 4 **CRITERIA AS STATED IN YOU DIRECT TESTIMONY. IS HE CORRECT?**

5 A. No. Mr. Parcell cites Aqua America and SJW Group as not meeting my criteria. However,
 6 my criteria for selection included the phrase, “are not the announced **subject of an**
 7 **acquisition.**” Neither Aqua America nor SJW Group are the target of an acquisition. Both of
 8 these entities are acquiring other entities, as are many (60%) of the proxy group companies
 9 utilized by Mr. Parcell.⁵

10 In mid-March 2018 Connecticut Water Service and SJW announced a planned merger
 11 with Connecticut Water being acquired by SJW.⁶ Similarly, in 2018 Aqua America
 12 announced that it was buying a natural gas utility, Peoples Natural Gas. If merger or
 13 acquisitions were a justifiable reason for eliminating a company from inclusion in a proxy
 14 group then most, if not all, water utility stocks would be eliminated since they are regularly
 15 acquiring other water and wastewater utility systems.

⁵ American Water Works Co. recently (January 31, 2019) entered into two acquisition agreements to add approximately 61,000 wastewater customers. During 2018, they closed on 15 acquisitions of various regulated water and wastewater systems. During 2017, they closed on 18 acquisitions of various regulated water and wastewater systems. California Water Service Group recently (December 13, 2018) received approval to purchase water system assets of Travis Air Force Base to serve more than 15,000 active and reserve personnel and civilians. York Water Co. completed the acquisitions of a water system and a wastewater system in 2017 and are currently negotiated additional wastewater acquisitions.

⁶ Neither Mr. Parcell nor I included Connecticut Water in our proxy group due to their being the subject of an announced acquisition.

1 **Q. DO YOU HAVE ANY OTHER COMMENTS REGARDING MR. PARCELL'S**
2 **PROXY GROUP?**

3 A. Yes. In addition to using a comparison group or proxy group to estimate the cost of equity,
4 proxy groups are used as a benchmark to satisfy the long-established guideline of providing a
5 utility the opportunity to earn a return equal to that of similar risk enterprises. However, Mr.
6 Parcell did not present any evidence regarding the similarity, or dissimilarity, of risk between
7 his comparison companies and PWR. A risk analysis of PWR and my proxy group
8 companies is discussed in my direct testimony in sections "Financial Analysis" and "Risk
9 Analysis." A risk analysis of PWR and proxy group companies is essential in determining a
10 fair rate of return because risk and return counter balance one another. That is, the greater
11 the risk, the higher the required return. Accordingly, I do not believe the Commission can or
12 should rely upon Mr. Parcell's recommendations.

13 **RISK FACTORS**

14 **Q. BESIDES THE AFOREMENTIONED REQUIRED RISK COMPARISON**
15 **BETWEEN PWR AND THE PROXY GROUP, WHICH MR. PARCELL DID NOT**
16 **PROVIDE, IS THERE OTHER EVIDENCE CONCERNING RISK THAT MR.**
17 **PARCELL FAILED TO CONSIDER?**

18 A. Yes, I can cite several examples showing that water and wastewater utilities face increased
19 risks which Mr. Parcell did not consider. First, unlike Mr. Parcell's proxy group, PWR's
20 debt interest expense is tied to 1-month LIBOR. This benefits the ratepayer at the risk to the
21 shareholder because as interest rates rise, PWR bear's the burden of the higher interest rates
22 until they file for new rates. Second, since 2014, the prime lending rate has increased 225-

basis points, or over 69%, increasing from 3.25% in 2014 to today's rate of 5.50%. March 2008 was the last time the prime rate was 5.50%. Third, Moody's credit rating agency stated the recently signed federal income tax law is "credit negative" for utilities:

Tax reform is credit negative for sector, but impact varies by company . . . The wide-ranging tax legislation passed by the US Congress on December 20, 2017 cut the statutory corporate tax rate to 21% from 35%. The legislation was broadly credit positive for corporate cash flows but for regulated investor-owned utilities, which include electric, gas and water utilities, the effect was the opposite. . . The legislation is credit negative for investor-owned utilities. A lower tax rate will reduce the difference between the amount that utilities collect from rate payers to cover taxes and their payments to tax authorities, reducing cash flow. . . Tax reform is neutral for earnings but negative for cash flow. Utilities collect revenue based on book tax but cash tax is much lower. A lower tax rate lowers revenue, while loss of bonus depreciation increases cash tax. . . Cash flow to debt ratio could decline by 150-250 basis points. We estimate that regulated utilities could experience a decline in the ratio of cash flow from operations pre-working capital to debt (CFO pre-WC/debt) of 150 bps to 250 bps, assuming no corrective action is taken.⁷

Finally, regarding the recently signed federal income tax law another credit rating agency, Standard & Poor's, has also recently stated:

One of the not-so-apparent implications of the tax reform legislation is that utility credit metrics will likely experience some strain due to the lower customer rates, revenues and cash flows resulting from the corporate tax rate reduction. Utilities can offset the pressure to their credit metrics in several ways. One approach is to reduce capital expenditures, which, while not increasing earnings or cash flow or rates, would conserve funds and counteract the strain on credit metrics. . . Another approach is that utilities can petition regulators for an increase in their authorized equity returns as a means of offsetting the negative credit ramifications of the new tax law.⁸

⁷ Moody's Investor Services, *Regulated Utilities - US: Tax Reform is Credit Negative for Sector, But Impact Varies by Company*, January 24, 2018, Page 1.

⁸ Standard & Poor's, *Financial Focus: Average Utility Equity Ratio Rises Slightly, Possibly from Tax Reform Fallout*, June 20, 2018, Page 1.

1 **Q. IS PWR SIMILAR IN SIZE TO MR. PARCELL'S PROXY GROUP?**

2 A. No. My testimony details the large size difference between PWR and my Comparable
3 Group. Company size is an indicator of business risk and was detailed earlier in my
4 testimony. The finance literature supports the fact that, as the size of a firm decreases, its
5 risk and, hence, its required return increases. Dr. Thomas Zepp presented research on water
6 utilities that support a small firm effect in the utility industry.⁹ Moreover, Professor Brigham
7 has indicated that smaller firms have higher capital costs than otherwise similar but larger
8 firms.¹⁰ Standard & Poor's, a credit rating agency, documents that relationship between size
9 and credit rating,

10
11 Company size and diversification often plays [a] role. While we have no
12 minimum size criterion for any given rating level, company size tends to be
13 significantly correlated to rating levels. This is because larger companies
14 often benefit from economies of scale and/or diversification, translating into a
15 stronger competitive position. Small companies are, almost by definition, -
16 more concentrated in terms of product, number of customers, and geography.
17 To the extent that markets and regional economies change, a broader scope of
18 business affords protection.¹¹ (Underline added.)

19
20 While we have no minimum size criterion for any given rating level, size and
21 ratings do end up being correlated, given that size often provides a measure
22 of diversification, and/or affects competitive positioning.¹² (Underline
23 added.)
24

⁹ See Zepp (2002), "Utility Stocks and the Size Effect: Revisited", Economics and Finance Quarterly, 43, 578-582.

¹⁰ See Fundamentals of Financial Management, 5th Edition, page 623.

¹¹ Standard & Poor's, Corporate Ratings Criteria 2008; pg. 22.

¹² Ibid; pg. 23.

1 Further, since size is a recognized and meaningful element of risk, it is appropriate to
2 reflect that risk in a company's cost of equity. Credit rating agencies recognize that size
3 impacts credit rating. The authors Brealey, Myers and Allen discuss the "firm size" and the
4 size premium.¹³ Additional support for the use of the size premium for utilities is also found
5 in a 1995 article by M. Annin.¹⁴

6 **Q. ARE THERE FACTORS THAT INDICATE CAPITAL COST RATES WILL**
7 **INCREASE MARKEDLY FROM THEIR CURRENT LEVELS?**

8 A. Yes, the Federal Reserve increased interest rates three times in 2017, and four more times in
9 2018, including the most recent change in December 2018. Prior to the new tax law, the
10 Federal Reserve forecasted another three rate increases in 2018 and two in 2019.
11 Additionally, given the markets' positive reaction to the recently enacted changes in tax law,
12 additional rate hikes may be forthcoming in reaction to the tax law's economic stimulus. The
13 tax law's economic stimulus and rate hikes will put upward pressure on long term interest
14 rates.

15 **Q. ON PAGE 14 MR. PARCELL REFERENCES AN AUGUST 2015 REPORT BY**
16 **KIPLINGER'S PERSONAL FINANCE AND A MARCH 2017 REPORT BY**
17 **VANGUARD NEWS & PERSPECTIVES TO BUTTRESS HIS OPINION THAT**
18 **INVESTORS' EXPECTATION OF RETURNS ARE LOWER TODAY. DO YOU**
19 **HAVE ANY COMMENTS CONCERNING THE REFERENCED REPORTS?**
20

¹³ Brealey, Myers and Allen, Principles of Corporate Finance, 10th edition, page 198.

¹⁴ See Annin (1995), "Equity and the Small Stock Effect", Public Utilities Fortnightly, October 15, 1995, at 42-43.

1 A. Yes. To date, since the Kiplinger's Personal Finance report was published in August 2015,
 2 the market (Dow Jones Industrial average) increased in price by more than 55% in three and
 3 a half years, or 13.1% on an annualized basis. This actual three and one- half year market
 4 return of 13.1% does not include the dividend returns that investors received which averaged
 5 more than 2.3% during this period. Further, to date, since the Vanguard News &
 6 Perspectives report was published in March 2017, the market increased in price by more than
 7 24% in just under two years, or 11.6% on an annualized basis. This annualized market return
 8 of 11.6% does not include the dividend returns that investors received which averaged more
 9 than 2.1% during this period.

10 Therefore, the market has provided a total return of about 13.7% to 15.4% during the
 11 period Mr. Parcell opined that there "has been a decline in investor expectations of
 12 returns."¹⁵ Based on the aforesaid, I conclude that investors in the market have not relied
 13 upon the reports used by Mr. Parcell since the reports' projections were considerably below
 14 the returns earned from investing.

15 **Q. ON PAGE 14 MR. PARCELL ALSO REFERENCES INTEREST RATES TO**
 16 **SUPPORT HIS OPINION THAT INVESTORS EXPECTATION OF RETURNS ARE**
 17 **LOWER TODAY. DO YOU HAVE ANY COMMENTS CONCERNING MR.**
 18 **PARCELL'S REFERENCE TO INTEREST RATES?**

19 A. Yes. I agree with Mr. Parcell that today's interest rates are lower than they were 35 years
 20 ago. However, today's interest rates are higher than they have generally been since 2014.

¹⁵ The referenced total return calculated as $11.6\% + 2.1\% = 13.7\%$ and $13.1\% + 2.3\% = 15.4\%$.

1 This can be seen by reviewing Mr. Parcell's page 2 of Schedule 2 where it is shown today's
2 interest rates are generally higher than they have been since 2014.

3 **MR. PARCELL'S RECOMMENDED COST OF EQUITY**

4 **Q. WHAT MARKET VALUE DCF ESTIMATE DOES MR. PARCELL RECOMMEND**
5 **FOR PWR?**

6 A. Mr. Parcell recommends a market value DCF of 9.2% which I believe is below the zone of
7 reasonableness.

8 **Q. WHY IS HIS RECOMMENDED DCF SO LOW?**

9 A. Mr. Parcell's DCF is the result of five different types of growth rates.¹⁶ Four of Mr. Parcell's
10 types of growth rates came from Value Line. The fifth growth rate is an analysts' consensus
11 EPS growth projection. Accordingly, only 20% of the types of growth used by Mr. Parcell
12 are consensus growth projections of EPS growth.¹⁷

13 Forty percent of Mr. Parcel's growth rates are "retention growth" rates and 40% of his
14 growth rates are historic growth rates. I believe Mr. Parcell's recommended DCF is low as a
15 result of his reliance upon "retention growth" rates instead of using published consensus
16 projected growth in earnings per share. He subjectively ignored the investor influencing
17 consensus growth rates of security analysts and instead, relied heavily upon "retention
18 growth" rates and historical growth rates. "Retention growth" measures growth in book
19 value, not stock price. Growth in book value is meaningless given today's relatively **high**

¹⁶ See Exhibit DCP-2, Schedule 6, page 4. Also see page 23, ll. 9-16, of Mr. Parcell's direct testimony.

¹⁷ Seventy five percent of the growth rates incorporated into my DCF are consensus EPS growth projections.

1 **market value** multiples and therefore, “retention growth” is not a good proxy for investors’
 2 growth expectations.

3 **Q. DO YOU HAVE ANY OTHER COMMENTS REGARDING MR. PARCELL’S DCF**
 4 **MODEL?**

5 A. Yes. Mr. Parcell used both a historic “retention growth” rate and a projected “retention
 6 growth” rate. Mr. Parcell’s historic “retention growth” rate for his proxy group is calculated
 7 using an average return on equity of 10.3%.¹⁸ Mr. Parcell’s projected “retention growth” rate
 8 is calculated using a projected return on equity of 11.7%.¹⁹ Mr. Parcell’s average historic
 9 ROE of 10.3% is **110-basis points higher** than Mr. Parcell’s recommended DCF of 9.2%
 10 and his average projected ROE of 11.7% is **150-basis points higher** than Mr. Parcell’s
 11 recommended DCF of 9.2%. This comparison demonstrates, and/or highlights, the
 12 inadequacy of Mr. Parcell’s recommendation.

13 Published consensus projected EPS growth rates are used primarily by investors.
 14 Further, academic studies²⁰ verify the superiority of analysts’ EPS growth forecasts over
 15 derived growth rates in predicting stock prices. Mr. Parcell developed unrealistically low
 16 DCFs through the use of a low growth estimate. The market-required cost of equity
 17 represents what the market will pay for a stock based on investors’ expectations of expected

¹⁸ See Exhibit DCP-2, Schedule 3, page 1. The 2014-2018 average ROE is 10.7% for “Value Line Water Group,” 10.3% for “Parcell Proxy Group” and 10.8% for “Walker Water Group.”

¹⁹ See Exhibit DCP-2, Schedule 3, page 1. The 2018 and 2021-2023 average ROE is 11.7% for “Value Line Water Group,” 11.7% for “Parcell Proxy Group” and 12.1% for “Walker Water Group.”

²⁰ Gordon, David, A., Gordon, Myron, J., and Gould, Lawrence, I.A Choice Among Methods of Estimating Share Yield,” The Journal of Portfolio Management, 50-55, Spring 1989.

1 future growth. Investors' expectations of expected future growth are not based upon Mr.
2 Parcell's unique growth rate, they are based on investors' expectations of expected future
3 growth.

4 For this reason, analysts' consensus projections of future growth prospects for water
5 utilities are required.²¹ Analysts' consensus EPS growth projections are not required because
6 they will necessarily prove correct. Rather, analysts' consensus EPS projections of future
7 growth prospects are required because real investors rely on them more than any other
8 source. It is irrelevant whether analysts are inherently over-or-under optimistic or
9 pessimistic. The analysts' forecasts are relied upon by investors when they price utility
10 stocks.

11 Even if Mr. Parcell's judgments concerning future growth were superior to the
12 analysts' consensus forecasts, there still would be no justification for using Mr. Parcell's
13 unique growth rate in a DCF formula because investors that price stocks are totally unaware
14 of Mr. Parcell's analysis (even if hypothetically it were better). Instead, investors rely upon
15 analysts' consensus forecasts, which are widely available and used by investors.

16 **Q. IS THERE A DIFFERENCE BETWEEN EARNED RETURNS, OR "ACCOUNTING**
17 **ROEs" AND THE ROE TO BE DETERMINED IN THIS CASE?**

18 A. No, not really. I agree there is a distinction between a market return and an accounting
19 return. The ROE that the Commission will determine in this case will become the PWR's
20 accounting ROE benchmark, along with rate base, by which under-earning and over-earning

²¹ Six of my proxy group companies also provide some wastewater service.

will be measured. If Mr. Parcell's proxy group is earning an accounting return of 10.3%-11.7% while PWR earns only 9.2%, it places PWR at a competitive disadvantage in the competition to attract capital.

Q. DO CURRENT MARKET CONDITIONS IMPACT MR. PARCELL'S COST OF EQUITY METHODOLOGIES MORE SO CURRENTLY THAN IN PREVIOUS PERIODS?

A. Yes. The basic proposition of financial theory regarding the economic value of a company is based on market value. That is, a company's value is based on its **market value** weighted average cost of capital.²² The American Society of Appraisers, ASA Business Valuation Standards, 2009, and the National Association of Certified Valuation Analysts, Professional Standards, 2007, use the same definition:

Weighted Average Cost of Capital (WACC). The cost of capital (discount rate) determined by the weighted average, **at market values**, of the cost of all financing sources in the business enterprise's capital structure. (bolding added)

Accordingly, the market value derived cost rate reflects the financial risk or leverage associated with **capitalization ratios based on market value**, not book value.

As shown in Table 1, there is a large difference in the market capitalization ratios and the book capitalization for Mr. Parcell's proxy group. This current difference in market values and book values results in debt/equity ratios based on **market value of 18%/82%**

²² Other examples, see <http://www.investinganswers.com/financial-dictionary/financial-statement-analysis/weighted-average-cost-capital-wacc-2905>. Also see <http://www.wallstreetmojo.com/weighted-average-cost-capital-wacc/>, or <http://accountingexplained.com/misc/corporate-finance/wacc>.

(debt/equity) verses 44%/56% (debt/equity) based on book value for Mr. Parcell's proxy group as shown on Table 1.

Differences in Book Values and Market Values for <u>Staff's Proxy Group</u>		
	Recent Book Value Capitalization Ratios (9/30/18)	Recent Market Value Capitalization Ratios
<u>Staff's Proxy Group</u>		
Long Term Debt	44.1 %	18.1 %
Preferred Stock	0.1	0.0
Common Equity	<u>55.8</u>	<u>81.9</u>
Total	<u>100.0 %</u>	<u>100.0 %</u>

Table 1

The larger the difference between market values and book values the less reliable the models' results are because **the models provide an estimate of the cost of capital of market value,** not book value.

Financial theory concludes capital structure and firm value are related. Since capital structure and firm value are related, a leverage adjustment (Hamada adjustment) is required when a cost of common equity model is based on market value and if its results are then applied to book value. As explained previously, the market value derived cost rate reflects the financial risk or leverage associated with **capitalization ratios based on market value,**

1 not book value. The authors Brealey, Myers and Allen provide a similar definition of the
2 cost of capital being based on market capitalization, not book value,

3 The values of debt and equity add up to overall firm value ($D + E = V$) and
4 firm value V equals asset value. **These figures are all market values, not**
5 **book (accounting) values.** The market value of equity is often much larger
6 than the book value, so the market debt ratio D/V is often much lower than a
7 debt ratio computed from the book balance sheet.²³
8

9 The work of Modigliani and Miller concludes that the market value of any firm is
10 independent of its capital structure and this is precisely the reason why the leverage
11 adjustment (Hamada adjustment) is appropriate. The only way for the market value of a firm
12 to remain independent of its capital structure is if the capital cost rates change to offset
13 changes in the capital structure. If the capital cost rates do not change to offset changes in
14 the capital structure, then the value of the firm will change. Clearly a leverage adjustment
15 (Hamada adjustment) is required when a cost of common equity model is based on **market**
16 **value** and if its results are then applied to **book value** because the capital structure is
17 changed from **market value** capitalization to **book value** capitalization.

18 Referring to Table 1, Mr. Parcell's proxy group's cost of capital is based on
19 debt/equity ratios based on **market value of 18%/82%** (debt/equity). Therefore, Mr.
20 Parcell's market value equity cost rates reflect an 82% equity ratio. That is not just my
21 opinion, but it is a corner stone of financial theory. Mr. Parcell's market value DCF cost rate
22 of 9.2% reflects an 81.9% equity ratio and yet he recommends a 9.2% cost of equity be
23 applied to his proxy group's 55.8% equity ratio based on book value. Even if Mr. Parcell's

²³ (Bolding added) Brealey, Myers and Allen, Principles of Corporate Finance, 10th edition, page 216.

1 9.2% cost of equity was appropriate for an 81.9% equity ratio, it cannot simultaneously be
2 appropriate for a 55.8% equity ratio without violation of Modigliani and Miller's precept.

3 **Q. WHAT MARKET VALUE CAPM ESTIMATE DOES MR. PARCELL**
4 **RECOMMEND FOR PWR?**

5 A. Mr. Parcell recommends a market value CAPM of 7.2% for PWR which I believe is below a
6 zone of reasonableness.

7 **Q. WHY IS HIS RECOMMENDED CAPM BELOW A ZONE OF REASONABLENESS?**

8 A. Mr. Parcell's CAPM calculation reflects improper inputs. For example, Mr. Parcell's market
9 premium is based on the average of two market returns and an accounting return. That is,
10 one-third of Mr. Parcell's market premium is based on his estimate of the spread in the S&P
11 500 index return on book value, or ROE, verses yields on T-Bonds. The actual earned ROE
12 for the S&P 500 index is not a capital cost rate, rather it is an accounting measure which
13 fluctuates widely.

14 I analyzed Mr. Parcell's S&P 500 index return on book value, or ROE, versus yields
15 on T-Bonds (Exhibit DCP-2, Schedule 7) and found that there is an inverse relationship
16 between his risk premium and the level of interest rate. That is, when interest rates are low,
17 the premium is high and when interest rates are high, the premium is low.

18 Specifically, Mr. Parcell lists 40 years of data (1977-2017) for the S&P 500 index risk
19 premium and T-Bond yields (interest rates) on Exhibit DCP-2, Schedule 7. I sorted his data
20 based upon interest rates from lowest to highest, separated into four equal periods of 10 years
21 each and found the following relationship:

- 1 1. The risk premium averaged 9.10% when interest rates were between 2.30% and
- 2 4.45%;
- 3 2. The risk premium averaged 8.71% when interest rates were between 4.68% and
- 4 6.18%;
- 5 3. The risk premium averaged 7.03% when interest rates were between 6.50% and
- 6 8.22%;
- 7 4. The risk premium averaged 3.60% when interest rates were between 8.81% and
- 8 13.50%.
- 9

10 Mr. Parcell looked at 40 years of data which had an average interest rate of 6.57% and an
 11 average risk premium of 7.11% and he concluded a risk premium of 7.11% was appropriate.
 12 However, today's T-Bond interest rate is 2.91% according to Mr. Parcell (Exhibit DCP-2,
 13 Schedule 8) which is much lower than the average interest rate of 6.57% relied upon by Mr.
 14 Parcell.

15 As shown above, during the period 1977-2017, the 10 years with the lowest interest
 16 rates had an average interest rate of 3.22%, reflecting a range of interest rates from 2.30% to
 17 4.45%, and had an average risk premium of 9.10%. This period resembles Mr. Parcell's
 18 current interest rate environment of 2.91%. Accordingly, if Mr. Parcell's methodology
 19 discussed above is appropriate to use he should have used a 9.10% risk premium, not 7.11%,
 20 because the current interest rate environment is 2.91%, according to Mr. Parcell.

21 The other two-thirds of Mr. Parcell's market premium is based on his estimate of an
 22 actual market return for the S&P 500 reported in the SBBI Year Book publication. However,
 23 Mr. Parcell used incorrect information in determining the SBBI market premium.

24 **Q. WHAT IS WONG WITH THE SBBI MARKET PREMIUM CONTAINED IN MR.**
 25 **PARCELL'S CAPM?**

1 A. Mr. Parcell's CAPM relies upon the SBBI market premium found in their annual Year Book
2 publication. SBBI devote a significant amount of their annual Year Book publication to the
3 discussion of the development of the market premium to be used in CAPM. Mr. Parcell
4 incorrectly relied upon a total market return for bonds in determining his market premium.
5 SBBI (2017) states the appropriate development of the equity market premium is estimated
6 based on the **arithmetic** mean total return of the S&P 500 minus the **arithmetic** mean
7 **income return component** of 20-year government bonds from 1926-2016.

8 Mr. Parcell's second flaw is the incorrect use of a geometric mean return instead of
9 the appropriate arithmetic mean. The arithmetic mean best measures the expectancy of a
10 single year. The geometric mean contains a downward bias in return rates in that as long as
11 there is variability among return rates in any given series, the geometric mean will appear
12 smaller with the existence of a majority of positive returns, while it will appear larger in
13 absolute terms (+/-) with the existence of a majority of negative returns.

14 The geometric mean return is a measure of the accumulation of wealth. It is
15 backward looking and only explains how you got from a beginning value to an ending value.

16 It does not explain what occurred between the two points. The arithmetic mean best
17 measures the expected or likely return in any single year. Cost of capital is not related to
18 measurement of the accumulation of wealth. Cost of capital is the estimation of the expected
19 return in any single year.

1 The expected rate of return is “the rate of return expected to be realized from an
 2 investment; the mean value of the probability distribution of possible results.”²⁴ The
 3 arithmetic mean is the mean value of a probability distribution. Moreover, the expected
 4 equity risk premium should always be calculated using the arithmetic mean.²⁵

5 **Q. WHAT ERRORS AND/OR OMISSIONS ARE CONTAINED IN MR. PARCELL’S**
 6 **CAPM?**

7 A. SBBI devotes an entire chapter of their annual Year Book publication to the discussion of
 8 size premiums and the importance of including size premiums when calculating a CAPM.
 9 Mr. Parcell’s CAPM does not include SBBI’s required size premium adjustment. The size
 10 premium reflects the risks associated with Mr. Parcell’s proxy group’s small size and its
 11 impact on the determination of their beta. This adjustment is necessary because beta
 12 (systematic risk) does not capture or reflect the proxy group’s small size. According to
 13 Brealey, Myers, and Allen, “the relationship among stock returns and firm size and book-to-
 14 market ratio has been well documented.”²⁶ Brealey, Myers, and Allen also state, on page
 15 202, that “between 1926 and 2008 the difference between the annual returns on small and
 16 large capitalization stocks averaged 3.6%” which should be included in Mr. Parcell’s CAPM.

²⁴ Eugene F. Brigham, Fundamentals of Financial Management, Fifth Edition, The Dryden Press, 1989, p. 106.

²⁵ 2017 SBBI Yearbook, Stocks, Bonds, Bills and Inflation. U.S. Capital Markets Performance by Asset Class 1926-2016, Duff and Phelps. Stocks, section 7 pg. 16.

²⁶ Brealey, Myers and Allen, Principles of Corporate Finance, 10th edition, page 198.

Investors prefer liquidity to lack of liquidity. Accordingly, a share in a business is worth more if it is easily marketable or, conversely, worth less if it is not. Privately held utilities and limited liability companies, such as PWR, are worth less than publicly traded water utilities. Further, publicly traded water utilities are not as marketable as the large companies which comprise the S&P 500. The size premium used in the CAPM accounts for some of these differences.

Q. DO YOU HAVE ANY OTHER COMMENTS REGARDING MR. PARCELL'S MARKET VALUE CAPM ESTIMATES?

A. Yes. The market value derived CAPM cost rate reflects the financial risk or leverage associated with **capitalization ratios based on market value**, not book value. As explained previously, there is a large difference in the market capitalization ratios and the book capitalization for Mr. Parcell's proxy group. This difference in market values and book values results in debt/equity ratios based on **market value of 18%/82%** (debt/equity) verses 44%/56% (debt/equity) based on book value for Mr. Parcell's proxy group. The larger the difference between market values and book values the less reliable the models' results are because **the models provide an estimate of the cost of capital of market value**, not book value.

Q. PLEASE EXPLAIN MR. PARCELL'S COMPARABLE EARNINGS ANALYSIS.

A. Mr. Parcell looks at actual earned accounting ROE's for the S&P 500 and his proxy group and their respective market-to-book ratios ("M/Bs") as a means of estimating a common equity cost rate. Based on his review, Mr. Parcell concluded a 10.0% common equity cost rate is reasonable for PWR based on his comparable earnings analysis.

1 **Q. WHAT IS THE SIGNIFICANCE OF THE S&P 500'S ROE AND THEIR M/B AND**
2 **THE COST OF CAPITAL FOR PWR?**

3 A. The actual earned ROE for the S&P 500 index is not a capital cost rate, rather it is an
4 accounting measure which fluctuates widely. The actual ROE for the S&P 500 index is not
5 an appropriate measure for cost of capital for PWR. I analyzed Mr. Parcell's ROE and M/Bs
6 shown for the S&P 500 index (Exhibit DCP-2, Schedule 10) and found there was very little,
7 if any, relationship between ROE and M/Bs.

8 Specifically, Mr. Parcell lists 16 years of data for the S&P 500 index on Exhibit DCP-
9 2, Schedule 10. I sorted his data based upon ROE from lowest to highest. The average ROE
10 during the eight years with the lowest ROE was 10.9% and the corresponding M/B averaged
11 275% during those same eight years. The average ROE during the eight years with the
12 highest ROE was 15.0% and the corresponding M/B averaged 256% during those same eight
13 years. This information proves that there is not a direct relationship between M/Bs and
14 ROEs.

15 **Q. IS THERE ANY SIGNIFICANCE TO MR. PARCELL'S PROXY GROUP'S**
16 **ACCOUNTING ROE AND THEIR M/B AS AN INDICATION FOR THE COST OF**
17 **CAPITAL FOR PWR?**

18 A. No. Mr. Parcell looked at accounting ROE's and M/Bs for his proxy group as a means of
19 estimating a common equity cost rate. I reviewed Mr. Parcell's data for the most recent year,
20 2018, and found Mr. Parcell's proxy group had an average ROE of 10.8% during this

1 period.²⁷ Further, Mr. Parcell's proxy group is projected to have a ROE of 11.6% in 2019
 2 and a 12.5% ROE for 2021-2023.²⁸ This information shows the flaw in Mr. Parcell's
 3 recommendation because if Mr. Parcell's proxy group is earning an accounting return of
 4 10.8%-12.5% while PWR earns only 10.0%, it places PWR at a competitive disadvantage
 5 in the competition to attract capital.

6 **Q. MR. PARCELL USED DCF, CAPM AND COMPARABLE EARNINGS TO**
 7 **DEVELOP HIS RECOMMENDED 9.6% COST OF EQUITY FOR PWR. DO YOU**
 8 **HAVE ANY COMMENTS REGARDING MR. PARCELL'S RECOMMENDED**
 9 **COMMON EQUITY COST RATE OF 9.6% FOR PWR?**

10 A. Yes. I previously pointed out that Mr. Parcell's proxy group earned a return on common
 11 equity of 10.8% in 2018 and are projected to earn a return on common equity of 11.6% in
 12 2019 and a 12.5% during 2021-2023. If the Comparable Group is earning an accounting
 13 return of 10.8% or 11.6% to 12.5% while PWR earns only 9.6%, it places PWR at a
 14 competitive disadvantage in the competition to attract capital.

15 Finally, comparing Mr. Parcell's recommended common equity cost rate of 9.6% for
 16 PWR to the recent Commission authorized 10.5% ROE for a larger wastewater utility,
 17 Carolina Water Service, also demonstrates the inadequacy of Mr. Parcell's recommendation.

²⁷ See Exhibit DCP-2, Schedule 3, page 1. The 2018 average ROE is 10.5% for "Value Line Water Group," 10.8% for "Parcell Proxy Group" and 10.9% for "Walker Water Group."

²⁸ See Exhibit DCP-2, Schedule 3, page 1. The "Value Line Water Group" average ROE is 11.7% for 2019 and 12.5% for 2021-2023. The "Walker Water Group" average ROE is 11.9% for 2019 and 13.2% for 2021-2023.

1 **MR. PARCELL'S RECOMMENDED OVERALL RATE OF RETURN**

2 **Q. MR. PARCELL RECOMMENDS AN OVERALL RATE OF RETURN OF 7.55%**
3 **FOR PWR. DO YOU HAVE ANY COMMENTS REGARDING MR. PARCELL'S**
4 **RECOMMENDED OVERALL RATE OF RETURN OF 7.55% FOR PWR?**

5 A. Yes, comparing Mr. Parcell's recommended overall rate of return of 7.55% for PWR to the
6 recent Commission authorized 8.62% overall rate of return for a larger wastewater utility,
7 Carolina Water Service, also demonstrates the inadequacy of Mr. Parcell's recommendation.
8 Mr. Parcell's recommended overall rate of return of 7.55% is **107-basis points below** the
9 recent Commission authorized 8.62% overall rate of return for Carolina Water Service. If
10 PWR is earning an overall rate of return of 7.55% while Carolina Water Service earns an
11 8.62% overall rate of return, it places PWR at a considerable competitive disadvantage in the
12 competition to attract capital. This comparison demonstrates, or and highlights, the
13 inadequacy of Mr. Parcell's recommendation.

14 **RESPONSE TO MR. PARCELL'S CRITICISM OF MR. WALKER'S TESTIMONY**

15 **Q. ON PAGE 39 MR. PARCELL CLAIMS YOUR RECOMMENDED GROWTH RATE**
16 **OF 7.6% USED IN YOUR DCF IS NOT SUPPORTED BY YOUR DATA. IS MR.**
17 **PARCELL CORRECT?**

18 A. No. As explained in my direct testimony, my recommended growth rate of 7.6% used in my
19 DCF is based on the average projected EPS growth rate. I relied on four sources of
20 information for projected EPS growth rate and three of the four sources are consensus growth
21 projections of EPS growth. The average consensus growth rate from each of my three

1 consensus sources are 7.2%, 8.5%, 6.5% and Value Line projected EPS growth averaged
2 8.2%. The average of these four sources is 7.6%.

3 **Q. ON PAGES 40 AND 41 MR. PARCELL STATES HIS UNDERSTANDING OF YOUR**
4 **“LEVERAGE ADJUSTMENT.” IS HIS PORTRAYAL OF THIS ADJUSTMENT**
5 **ACCURATE?**

6 A. No. I explain the reason this adjustment should be used in my direct testimony. Further,
7 previously in my rebuttal testimony I explain in detail that financial theory concludes capital
8 structure and firm value are related. Since capital structure and firm value are related, a
9 leverage adjustment (Hamada adjustment) is required when a cost of common equity model
10 is based on **market value** and if its results are then applied to **book value**. As explained
11 previously, the market value derived cost rate reflects the financial risk or leverage associated
12 with **capitalization ratios based on market value**, not book value.

13 **Q. ON PAGES 41 AND 42 MR. PARCELL STATES THAT YOU DID NOT PROVIDE A**
14 **JUSTIFICATION FOR THE MARKET RISK PREMIUM COMPONENT USED IN**
15 **YOUR CAPM. IS MR. PARCELL CORRECT?**

16 A. No. The market risk premium component used in my CAPM was explained on pages 45 and
17 46 of my direct testimony and also on Schedule 17 of my supporting exhibit.

18 **Q. ON PAGES 42 TO 43 MR. PARCELL STATES HIS BELIEF THAT A RISK**
19 **ADJUSTMENT FOR PWR’S SMALL SIZE WOULD BE INCORRECT AS IT**
20 **IGNORES THE COMPANY’S STATUS AS A “SUBSIDIARY OF A LARGER**
21 **COMPANY.” DID MR. PARCELL PROVIDE ANY EVIDENCE SUPPORTING**
22 **THIS VIEW?**

1 A. No, he did not provide any support for his stated view. The authors Brealey, Myers and
2 Allen hold a view that is opposite to Mr. Parcell's opinion, stating that "the true cost of
3 capital depends on project risk, not on the company undertaking the project."²⁹ From
4 Brealey,
5 Myers and Allen view, PWR is the "project risk" and its investors would be "the company
6 undertaking the project." Accordingly, from investors' perspective, investment risk is the
7 use of the funds (e.g., PWR), not the source of those funds. Therefore, PWR's small size is a
8 relevant when determining their cost of capital.

9 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

10 A. Yes.

²⁹ Brealey, Myers and Allen, Principles of Corporate Finance, 10th edition, page 215.